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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,809	11/26/2003	Eunsoo Shim	02003	8121
NEC Laboratories America, Inc. 4 Independence Way			EXAMINER	
			SABOURI, MAZDA	
Princeton, NJ 08540			ART UNIT	PAPER NUMBER
			2617	
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SHORTENED STATUTOR	Y PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE	
3 MO	NTHS	04/20/2007	PAPER	

## Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	T A P 47 N -	A 1: 4(-)				
	Application No.	Applicant(s)				
065 - 4 - 4' 0	10/722,809	SHIM ET AL.				
Office Action Summary	Examiner	Art Unit				
	Mazda Sabouri	2617				
The MAILING DATE of this communication app Period for Reply	pears on the cover sheet with the o	correspondence address				
A SHORTENED STATUTORY PERIOD FOR REPL WHICHEVER IS LONGER, FROM THE MAILING D  - Extensions of time may be available under the provisions of 37 CFR 1.1 after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory period  - Failure to reply within the set or extended period for reply will, by statute Any reply received by the Office later than three months after the mailin earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION  136(a). In no event, however, may a reply be tin  will apply and will expire SIX (6) MONTHS from  e, cause the application to become ABANDONE	N. nely filed the mailing date of this communication. D (35 U.S.C. § 133).				
Status						
1) Responsive to communication(s) filed on 21 F	ebruary 2007.					
2a)⊠ This action is <b>FINAL</b> . 2b)☐ This	This action is <b>FINAL</b> . 2b) ☐ This action is non-final.					
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is						
closed in accordance with the practice under b	Ex parte Quayle, 1935 C.D. 11, 4	53 O.G. 213.				
Disposition of Claims						
4) Claim(s) 2-10,12-16 and 18-34 is/are pending	4) Claim(s) <u>2-10,12-16 and 18-34</u> is/are pending in the application.					
4a) Of the above claim(s) is/are withdra	wn from consideration.					
5) Claim(s) is/are allowed.						
6) Claim(s) 2-10,12-16 and 18-34 is/are rejected						
7) Claim(s) is/are objected to.						
8) Claim(s) are subject to restriction and/o	or election requirement.					
Application Papers						
9) The specification is objected to by the Examine	er.					
10)⊠ The drawing(s) filed on <u>26 November 2003</u> is/are: a)⊠ accepted or b)□ objected to by the Examiner.						
Applicant may not request that any objection to the	drawing(s) be held in abeyance. Se	e 37 CFR 1.85(a).				
Replacement drawing sheet(s) including the correct						
11) ☐ The oath or declaration is objected to by the E	xaminer. Note the attached Office	Action or form PTO-152.				
Priority under 35 U.S.C. § 119	•					
12) ☐ Acknowledgment is made of a claim for foreign a) ☐ All b) ☐ Some * c) ☐ None of:		)-(d) or (f).				
1. Certified copies of the priority documen						
2. Certified copies of the priority document	•					
<ol> <li>Copies of the certified copies of the price</li> <li>application from the International Burea</li> </ol>	•	ed in this National Stage				
* See the attached detailed Office action for a list		ed.				
Attachment(s)	0 🗆 International Com-	(DTO 412)				
<ol> <li>Notice of References Cited (PTO-892)</li> <li>Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> </ol>	4) Interview Summary Paper No(s)/Mail D	ate				
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date	5) Notice of Informal F 6) Other:	Patent Application (PTO-152)				

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#### **DETAILED ACTION**

## Response to Arguments

- 1. Applicant's arguments with respect to claims 2-10,12-16,18-20 and 21-31 filed on 2/21/2007 have been fully considered but they are not persuasive.
- 2. With regard to claims 2-3,5-8,10,13-16 and 18-20, applicant argues that Trossen does not teach "measuring delay occurring during the handoff of the mobile terminal to the second node". Applicant further argues that "in the present application, what is measured is the length of time that the MN has been connected to the NAR". Examiner traverses these arguments. With regard to the latter argument, examiner notes that claim 5 does not recite measuring how long the MN has been connected to the NAR. With regard to the first argument, Trossen teaches that the "NAR checks with the PAR to see if the MN was recently present in the PAR's network" immediately after handover (see Trossen, page 3, last paragraph and page 4, paragraph 4). Checking for the recent presence requires measuring the difference between two points of reference. The first point of reference indicates the time at which the MN is handed over to the NAR. The second point of reference indicates the most recent time at which the MN was connected to the PAR prior to handover (see Trossen, page 4, paragraph 4). The measured difference between the two times indicates whether or not the MN was recently present in the PAR's network. This measured difference is also indicative of delay occurring during handoff, due to the fact that one point of reference is the time in which the MN is last connected to the PAR prior to handover, and the second point of

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reference is the time in which the MN is connected to the NAR after handover has occurred.

With regard to claims 21,25,26,28,29 and 31, applicant argues that the "access 3. nodes" of these claims do not refer to the traditional base stations taught by Smolik, but instead refer to nodes that provide access to a packet communication network. Examiner traverses this argument. Examiner notes that in the rejection of claims 21 and 26. Illidge teaches access nodes (base station) that provide access to a packet communication network (Internet) (see Illidge, figure 1B). Applicant further argues that the mobile stations of Smolik do not "discover new candidate access nodes". Examiner traverses this point as well. Examiner notes that Smolik teaches a mobile terminal receiving pilot channels not previously known to the mobile terminal (pilot channels indicative of base stations that are not currently present in the handoff neighbor list of the mobile terminal), and sending this information to the network (see Smolik, column 1, lines 62-67 and column 2, lines 1-37 and column 9, lines 48-67 and column 10, lines 1-47). Applicant further argues that proper motivation is not provided for combining Smolik and Illidge. Examiner traverses this point as well. In the rejection of claims 21 and 26, the examiner provided motivation for combining Smolik and Illidge. The rejection stated that "[t]he base station of Illidge improves upon that of Smolik, by providing access to the Internet, as well as the CDMA network". The CDMA base station of Smolik only provides access to a switched network (MSC), the CDMA base station of Illidge provides access to both a switched network (MSC) and a packet network (Internet), giving the user access to more potential information and services.

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4. With regard to claims 22, 27 and 30, applicant argues that Maupin does not teach representing the candidate access node list as a bit map. Examiner traverses this point. Examiner notes that Smolik already teaches the network storing a candidate access node list (see rejections of claim 21 and 26). Maupin teaches that network represent information that is sent to mobile terminals (notê the candidate access node lists are sent to mobile terminals) as bitmaps (see Maupin, column 2, lines 64-67 and column 3, lines 1-20).

- 5. Applicant's arguments with respect to claims 32-34 have been considered but are moot in view of the new ground(s) of rejection.
- 6. Applicant's amendment (claims 32-34) necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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### Claim Rejections - 35 USC § 102

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

- 7. Claims 2-3,5-8,10 and 13-16 rejected under 35 U.S.C. 102(b) as being anticipated by INTERNET DRAFT "A Dynamic Protocol for Candidate Access-Router Discovery" (Trossen et al.). Note that the pages cited from Trossen are the page numbers as defined within the article.
- 8. **As to claim 5**, Trossen teaches a method comprising the steps of:
  - a. Providing a mobile terminal with information identifying a first access node prior to handoff to another access node (MN has the IP address of the PAR).
  - b. After handoff of the mobile terminal to a second access node, receiving at the first access node, a message from the second access node requesting verification of information provided by the mobile terminal to the second access node (PAR verifies the accuracy of the information provided to the NAR by the MN).
  - c. Verifying the information provided by the mobile terminal to the second access node before updating information on candidate access nodes in the mobile communication network (once the information is verified, the NAR stores the information provided by the MN in it's CAR list) (see Trossen, pages 3 and 4).
  - d. Wherein the information provided by the mobile terminal to the second access node is verified by measuring delay occurring during the handoff of the mobile terminal to the second access node (Trossen further teaches that the

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information provided by the mobile terminal to the second access node is verified by measuring delay occurring during handoff of the mobile terminal to the second access node. The NAR checks with the PAR to see if the MN was recently present in the PAR's network) (see Trossen, page 4).

- 9. **As to claim 13**, Trossen teaches a first access node (PAR) comprising memory for storing information on candidate access nodes in a mobile communication network and a processor that executes device-readable instructions for performing the steps of:
  - e. Providing a mobile terminal with information identifying the first access node prior to handoff to another access node (MN has the IP address of the PAR).
  - f. After handoff of the mobile terminal to a second access node, receiving a message from the second access node requesting verification of information provided by the mobile terminal to the second access node (PAR verifies the accuracy of the information provided to the NAR by the MN).
  - g. Verifying the information provided by the mobile terminal to the second access node before updating information on candidate access nodes in the mobile communication network (once the information is verified, the NAR stores the information provided by the MN in it's CAR list and the PAR also stores information on the NAR) (see Trossen, pages 3 and 4).
  - h. Wherein the information provided by the mobile terminal to the second access node is verified by measuring delay occurring during the handoff of the mobile terminal to the second access node (Trossen further teaches that the

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information provided by the mobile terminal to the second access node is verified by measuring delay occurring during handoff of the mobile terminal to the second access node. The NAR checks with the PAR to see if the MN was recently present in the PAR's network) (see Trossen, page 4).

- 10. **As to claim 2**, Trossen further teaches that the information on candidate access nodes is recorded in a table (CAR list) and shared among mobile terminals in the mobile communication network (CAR list is transmitted to the MN, it is inherent that all MN in the NAR network would receive this list) (see Trossen, page 6).
- 11. **As to claim 3**, Trossen further teaches that the information identifying the first access node comprises the network address (IP address) of the first access node (see Trossen, page 3).
- 12. **As to claim 6**, timestamps are inherent to the teachings of Trossen cited in the rejection of claim 5. A timestamp must be used to determine whether or not the mobile terminal was recently present in the PAR's network.
- 13. As to claims 7 and 14, Trossen further teaches that the information provided by the mobile terminal to the second access node comprises an identifier for the mobile terminal and wherein the information is verified by checking whether the mobile terminal that provided the information to the second access node is the same mobile terminal that communicated with the first access node prior to handoff (NAR checks with the PAR to see if the MN was recently present in the PAR's network. The identity of the MN must be sent to the NAR, in order to perform this step) (see Trossen, page 4).

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14. **As to claims 8 and 15**, Trossen further teaches that the message from the second access node is authenticated (PAR confirms the validity of the information) (see Trossen, page 4).

- 15. As to claims 10 and 16, Trossen further teaches that the mobile terminals are IP devices and the access nodes are IP routers (see Trossen, page iv).
- 16. **As to claims 32-34**, note that the second access node (NAR) and first access node (PAR) are IP routers that communicate with each through IP protocol (see Trossen, page iv and 4). The nodes must have MAC addresses in order to facilitate communication through the data link layer.

## Claim Rejections - 35 USC § 103

- 17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 18. Claims 4,12 and 18-20, rejected under 35 U.S.C. 103(a) as being unpatentable over INTERNET DRAFT "A Dynamic Protocol for Candidate Access-Router Discovery" (Trossen et al.) in view of US 7065340 (Einola et al.)
- 19. **As to claims 4 and 12**, what is lacking is the information provided by the mobile terminal to the second access node comprising a ticket generated by the first access node. In a similar field of endeavor, Einola teaches a mobile terminal receiving a ticket

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(cipher key) from a first access node (first base station in the first mobile communication network) prior to handoff. After handoff, the mobile terminal provides the ticket to a second access node (second base station in the second mobile communication network). The second access node verifies the ticket with the first access node (the second base station verifies the cipher code provided by mobile terminal against the cipher code provided by the first base station) (see Einola, column 8, lines 4-22). The teaching of Einola allows the second access node to authenticate a mobile terminal after handoff. It would have been obvious to one of ordinary skill in the arts at the time the invention was made to combine the teachings of Einola into those of Trossen, for the reasons mentioned above.

- 20. **As to claim 18**, Trossen teaches a mobile terminal comprising memory and a processor for performing the steps of:
  - i. Prior to handoff to another access node, receiving information (IP address of PAR) identifying a first access node.
  - j. Storing the information identifying the first access node.
  - k. After handoff of the mobile terminal to a second access node, sending the information identifying the first access node to the second access node, so that the second access node can verify the information provided by the mobile terminal with the first access node prior to updating information on candidate access nodes (PAR verifies the accuracy of the information provided to the NAR by the MN. Once the information is verified, the NAR stores the information provided by the MN in its CAR list) (see Trossen, pages 3 and 4).

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I. Wherein the information provided by the mobile terminal to the second access node is verified by measuring delay occurring during the handoff of the mobile terminal to the second access node (Trossen further teaches that the information provided by the mobile terminal to the second access node is verified by measuring delay occurring during handoff of the mobile terminal to the second access node. The NAR checks with the PAR to see if the MN was recently present in the PAR's network) (see Trossen, page 4).

m. What is lacking is the information provided by the mobile terminal to the second access node comprising a ticket generated by the first access node. In a similar field of endeavor, Einola teaches a mobile terminal receiving a ticket (cipher key) from a first access node (first base station in the first mobile communication network) prior to handoff. After handoff, the mobile terminal provides the ticket to a second access node (second base station in the second mobile communication network). The second access node verifies the ticket with the first access node (the second base station verifies the cipher code provided by mobile terminal against the cipher code provided by the first base station) (see Einola, column 8, lines 4-22). The teaching of Einola allows the second access node to authenticate a mobile terminal after handoff. It would have been obvious to one of ordinary skill in the arts at the time the invention was made to combine the teachings of Einola into those of Trossen, for the reasons mentioned above.

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- 21. **As to claim 19**, Trossen further teaches that the information provided by the mobile terminal to the second access node comprises an identifier for the mobile terminal and wherein the information is verified by checking whether the mobile terminal that provided the information to the second access node is the same mobile terminal that communicated with the first access node prior to handoff (NAR checks with the PAR to see if the MN was recently present in the PAR's network. The identity of the MN must be sent to the NAR, in order to perform this step) (see Trossen, page 4).
- 22. **As to claim 20**, Trossen further teaches that the mobile terminals are IP devices and the access nodes are IP routers (see Trossen, page iv).
- 23. **Claim 9** rejected under 35 U.S.C. 103(a) as being unpatentable over INTERNET DRAFT "A Dynamic Protocol for Candidate Access-Router Discovery" (Trossen et al.) in view of US 2004/0123142 (Dubal et al.).
- 24. **As to claim 9**, what is lacking is putting a limit on the number of message sent by the mobile terminal prior to verifying the information provided by the mobile terminal. In a similar field of endeavor, Dubal teaches placing limits on messages (received packets) between elements in a network. Dubal teaches that such limits help to prevent denial of service attacks (see Dubal, paragraphs 15-19 and figure 4). The teachings of Dubel improve upon the method of Trossen by implementing steps to help prevent against denial of service attacks. It would have been obvious to one of ordinary skill in the arts at the time the invention was made to combine the teachings of Dubal into those of Trossen, for the reasons mentioned above.

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25. Claims 21,25,26,28,29 and 31 rejected under 35 U.S.C. 103(a) as being unpatentable over US 6119005 (Smolik) in view of US 2002/0085514 (Illidge et al.).

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- 26. **As to claim 21**, Smolik teaches a method of discovering access nodes in a mobile communications network comprising the step of:
  - n. Receiving a candidate access node list (list of viable pilot channel candidates) from a mobile terminal.
  - o. Updating the candidate access node list (the neighbor list) to reflect nodes discovered by the mobile terminal (see Smolik, column 1, lines 62-67 and column 2, lines 1-37).
  - p. Providing an updated candidate list to the mobile terminal (see Smolik, column 5, lines 51-61). Note that the examiner interprets the 'updated neighbor list' as reading on an 'updated candidate list'. Smolik teaches that the candidate list is derived (within the mobile terminal) from the neighbor list (see Smolik, column 9, lines 48-67 and column 10, lines 1-47).
  - q. What is lacking is the access node providing access to a packet communication network. The access node of Smolik is a base station in CDMA network (see Smolik, column 3, lines 8-11). Smolik is silent on whether this base station provides access to a packet network. In a similar field of endeavor Illidge teaches a base station (103 fig 1B) in a CDMA network (2G and 3G) that provides access to a packet network (128 fig 1B) (see Illidge, paragraphs 11-13). The base station of Illidge improves upon that of Smolik, by providing access to the Internet, as well as the CDMA network. It would have been obvious to one of

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ordinary skill in the arts at the time the invention was made to combine the teachings of Illidge into those of Smolik, for the reasons mentioned above.

- 27. **As to claim 26**, Smolik teaches an access node (base station) having memory and processing means for performing the steps of:
  - r. Receiving a candidate access node list (list of viable pilot channel candidates) from a mobile terminal.
  - s. Updating the candidate access node list (the neighbor list) to reflect nodes discovered by the mobile terminal (see Smolik, column 1, lines 62-67 and column 2, lines 1-37).
  - t. Providing an updated list to the mobile terminal (see Smolik, column 5, lines 51-61). Note that the examiner interprets the 'updated neighbor list' as reading on an 'updated candidate list'. Smolik teaches that the candidate list is derived (within the mobile terminal) from the neighbor list (see Smolik, column 9, lines 48-67 and column 10, lines 1-47).
  - u. What is lacking is the access node providing access to a packet communication network. The access node of Smolik is a base station in CDMA network (see Smolik, column 3, lines 8-11). Smolik is silent on whether this base station provides access to a packet network. In a similar field of endeavor Illidge teaches a base station (103 fig 1B) in a CDMA network (2G and 3G) that provides access to a packet network (128 fig 1B) (see Illidge, paragraphs 11-13). The base station of Illidge improves upon that of Smolik, by providing access to the Internet, as well as the CDMA network. It would have been obvious to one of

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ordinary skill in the arts at the time the invention was made to combine the teachings of Illidge into those of Smolik, for the reasons mentioned above.

- 28. **As to claim 29**, Smolik teaches a mobile terminal having memory and processing means for performing the steps of:
  - v. Providing a candidate access node list (list of viable pilot channel candidates) to an access node.
  - w. Receiving an updated list from the access node (see Smolik, column 5, lines 51-61). Note that the examiner interprets the 'updated neighbor list' as reading on an 'updated candidate list'. Smolik teaches that the candidate list is derived (within the mobile terminal) from the neighbor list (see Smolik, column 9, lines 48-67 and column 10, lines 1-47).
  - x. Storing the updated candidate list in the memory (see Smolik, column 1, lines 62-67 and column 2, lines 1-37).
  - y. What is lacking is the access node providing access to a packet communication network. The access node of Smolik is a base station in CDMA network (see Smolik, column 3, lines 8-11). Smolik is silent on whether this base station provides access to a packet network. In a similar field of endeavor Illidge teaches a base station (103 fig 1B) in a CDMA network (2G and 3G) that provides access to a packet network (128 fig 1B) (see Illidge, paragraphs 11-13). The base station of Illidge improves upon that of Smolik, by providing access to the Internet, as well as the CDMA network. It would have been obvious to one of

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ordinary skill in the arts at the time the invention was made to combine the teachings of Illidge into those of Smolik, for the reasons mentioned above.

- As to claims 25,28 and 31, the access node of Smolik in view of Illidge further comprises an IP routing circuit (the base station of Illidge routes IP data). The mobile terminal of Smolik in view of Illidge further comprises an IP device (a device that accepts IP data).
- 30. Claims 22,27 and 30 rejected under 35 U.S.C. 103(a) as being unpatentable over US 2000/6119005 (Smolik) in view of US 2002/0085514 (Illidge et al.), and further in view of US 2003/6600917 (Maupin).
- 31. As to claims 22,27 and 30, what is lacking is a bitmap table being used to store the candidate node list. Maupin teaches base stations storing information into bitmaps and sending those bitmaps to mobile terminals (see Maupin, column 2, lines 64-67 and column 3, lines 1-20). The motivation for using this teaching can be found in Maupin. Maupin teaches that the mobile terminals decode the bitmaps in order to retrieve the relevant information (see Maupin, column 2, lines 64-67). The use of the word "decode" reads on the bitmaps providing some level of security for the information. It would have been obvious to one of ordinary skill in the arts at the time the invention was made to combine the teachings of Maupin into those of Smolik, for the reasons mentioned above.
- 32. Claim 23 rejected under 35 U.S.C. 103(a) as being unpatentable over US 2000/6119005 (Smolik) in view of US 2002/0085514 (Illidge et al.) as applied to claim 21, and further in view of US 2004/6813357 (Matsuzaki et al.).

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33. As to claim 23, what is lacking from Smolik is the step of digitally signing the candidate list prior to sending the candidate list to the mobile terminal. Matsuzaki teaches that data sent from an access node (base station) to a mobile terminal is digitally signed (see Matsuzaki, column 16, lines 13-57). The motivation for using a digital signature can be found in Matsuzaki. Matsuzaki teaches that digital signatures guard against third party tampering (see Matsuzaki, column 16, lines 13-17). Matsuzaki further teaches that the use of digital signatures enhances the role of base stations.

Base stations can be made to hold private information (in addition of public information) that can only be accessed by an authorized terminal (see Matsuzaki, column 16, lines 58-61). It would have been obvious to one of ordinary skill in the arts at the time the invention was made to combine the teachings of Matsuzaki into those of Smolik, for the reasons mentioned above.

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- 34. Claim 24 rejected under 35 U.S.C. 103(a) as being unpatentable over US 2000/6119005 (Smolik) in view US 2002/0085514 (Illidge et al.) and applied to claim 21, and further in view of US/2002/6370380 (Norefors et al.).
- 35. As to claim 24, what is lacking from Smolik is the step of establishing a key for secure message exchange before communicating with the mobile terminal. Norefors teaches a method for establishing a secure message exchange between a mobile terminal and an access node prior to communication (see Norefors, SUMMARY). The motivation for using Norefors teachings can be found in Norefors. Norefors teaches that establishing a secure message exchange prevents unauthorized third party intrusions (see Norefors, SUMMARY). It would have been obvious to one of ordinary skill in the

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arts at the time the invention was made to combine the teachings of Norefors into those of Smolik, for the reason mentioned above.

#### Conclusion

36. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 1999/5884158 (Ryan et al.) teaches a cellular telephone authentication system using a digital certificate. US 2004/0266393 (Zhao et al.) teaches a method of system access to a wireless network. US 2002/6430414 (Sorokine et al.) teaches a soft handoff and wireless communication system for third generation CDMA systems. US 2004/6813508 (Shioda et al.) teaches an apparatus and method for mobile communication. US 1998/5854981 (Wallstedt et al.) teaches an adaptive neighbor cell list.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mazda Sabouri whose telephone number is 571-272-8892. The examiner can normally be reached on Monday-Friday from 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duc Nguyen can be reached on 561-272-7503. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mazda Sabouri Examiner Art Unit 2617

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SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600